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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,578	06/29/2001	Robert J. Royer JR.	ITL.1276US (P11447)	6935

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EXAMINER	
PORTKA, GARY J	

ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/895,578	ROYER ET AL.	
	Examiner	Art Unit	
	Gary J. Portka	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 22-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 22-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 and 22-30 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-17 and 22-30 are rejected under 35 U.S.C. 102(e) as anticipated by March et al., US 6,647,471 (hereinafter "March").

5. As to claims 1, 7, 13, 22, and 27, March discloses a *method, non-volatile memory, system, and program comprising partitioning a non-volatile storage media, storing data in a first partition and metadata corresponding to the data in a second partition* (see Abstract, Figs. 1, 3, 7, 8 and 9, col. 1 lines 15-30, and col. 9 lines 30-59,

where the file data is considered stored in the first partition, and the associated file structures therefor considered metadata stored in the second partition; for example, in Fig. 9B the first partition is considered block 0 while the second partition is blocks 1-x, however many store the first file system), and *accessing the second partition upon/on/during/in a system boot* (see col. 9 lines 41-47, where a boot block file structure by definition is accessed during system boot). The processor is at data storage system 10, the hub is the controlling circuitry of 20/70/200.

6. As to claims 6, 10-11, 16 and 30, the device described in March may be considered a portion of the mass storage device as recited.

7. Claims 1-5, 7-9, 12-15, 17, and 22-29 are rejected under 35 U.S.C. 102(b) as anticipated by Raju et al., US 6,078,999 (hereinafter "Raju").

8. As to claims 1, 7, 13, 22, and 27, Raju discloses a *method, non-volatile memory, system, and program comprising partitioning a non-volatile storage media, storing data in a first partition and metadata corresponding to the data in a second partition* (see Abstract, Figs. 2, 8, and 9, col. 3 lines 1-22 and 40-55, col. 6 line 62 to col. 7 line 3, col. 7 lines 18-24, and col. 8 line 49 to col. 9 line 12, where the shadow copies of the streams that are flushed to disk are considered making up the first partition, and the transaction table flushed to disk is considered the metadata making up the second partition), and *accessing the second partition upon/on/during/in a system boot* (see col. 7 lines 1-3, and col. 9 lines 8-12, where it is clarified that the first embodiment accesses the transaction tables in secondary storage during boot time). The processor is at data storage system 10, the hub is the controlling circuitry of 56.

9. Claims 2, 8, 14, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over March, in view of Cooper et al., U.S. Patent 6,512,597 B1 (hereinafter "Cooper", or alternatively over Raju in view of Cooper.

10. As to claims 2, 8, 14, 23, and 28, neither March nor Raju disclose storing the metadata as packed. However, it was well known that packing of any type of data would advantageously reduce the required space (see Cooper col. 4 lines 59-61) and thus either reduce the storage capacity required to minimize the cost, or increase the amount of the data that could be stored. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to pack the metadata, because it was well known that packing of any type of data minimizes the storage space required for it.

11. Claims 6, 10-11, 16, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raju, in view of Forehand et al., U.S. Patent 6,516,426 B1.

12. As to claims 6, 10-11, 16 and 30, Raju does not disclose the non-volatile cache as part of a mass storage device. However, it was known in the art to implement a part of a mass storage device as a non-volatile cache. Forehand teaches that storing data in a non-volatile manner is required to avoid loss of data (see col. 1 lines 43-49), and that the expense and control issues of other non-volatile caching techniques are solved by an on-disk caching technique (see col. 2 lines 4-34). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the non-volatile cache as part of a mass storage device, because this was previously known as a less expensive and easier controlled method of avoiding the loss of data.

13. As to claims 3-5, 9, 12, 15, 17, 24-26, and 29, all limitations are considered disclosed in or inherent to the sections of Raju and March cited hereinabove.

Response to Arguments

14. Applicant's arguments filed August 4, 2006 have been fully considered but are not persuasive. Applicant has argued that the interpretation of the term "partition" is inconsistent with the reference and with usage of the term as by one skilled in the art. Two definitions are offered. However, Applicant does not admit that their intended meaning of the word is as stated in either definition, and obviously desires it to be interpreted as broadly as possible in line with their own specification. Since the present specification does not define the term with enough specificity to determine that the term includes details given by the definitions, it must be given broadest reasonable interpretation. For example, the cnet definition states it means "the portion of a hard disk that functions as a separate drive". Applicant has not stated, and it is not apparent that, the claimed term must meet this limitation. The computer desktop encyclopedia definition states it is a "reserved part of a disk or memory that is set aside for some purpose". Examiner takes this as a broadest reasonable interpretation, and thus maintains that the interpretation as described in the rejections hereinabove meets this definition. The remainder of the latter definition goes on to give examples of partitioning a hard disk using Fdisk, and how the disk may be partitioned into what act like separate drives to the operating system. Again, since Applicant has not stated either in their specification or by any argument that their claim term requires these elements, it cannot

be assumed that all such examples given to help understand the meaning of the term are required for broadest reasonable interpretation of the term.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gary J Portka
Primary Examiner
Art Unit 2188
GARY PORTKA
PRIMARY EXAMINER

September 18, 2006